

U.S. Antarctic Marine Living Resources Program
2008-2009 Weekly Field Reports
Cape Shirreff, Livingston Island

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Seabirds:

1. All of the gentoo penguin reproduction study nests have either hatched or failed, 82% of the nests have hatched and 18% have failed. We have started to see chinstrap penguin chicks in our reproduction study nests. In the 4 weeks since chinstrap penguin clutch initiation 3% of the chinstrap penguin reproduction nests have hatched, 85% continue to incubate eggs, and 12% have failed.
2. We continue to monitor known age penguins that were banded here as chicks. Of the 36 known aged gentoo penguins that have nested 53% have hatched, 5% continue to incubate eggs and 42% have failed. Forty known aged chinstrap penguins have nested. Of these, 3% have hatched, 67% are incubating eggs, and 30% nests have failed.
3. Nineteen of the brown skua pairs we monitor have initiated nests, and two have failed.
4. This past week we had two unusual visitors to the penguin colonies. On 16 December a rockhopper penguin was seen and on 17 December a macaroni penguin was seen. Both only stayed onshore overnight and were gone the following day.

Pinnipeds:

5. We completed the first round of deployments of diving and location instrument for studies of foraging range and effort.



We are now collecting data on five lactating female fur seals using Wildlife Computers MK 10 GPS/TDR instruments. These instruments also have external temperature probes that will allow us to measure depth of the thermo line at fur seal foraging locations recorded with GPS technology. Two of the five females are at sea and three are still on shore. Three of the five also have ARGOS transmitters that give location as well. These three are part of a comparative study of the two types of technology for recording at sea locations.

6. As of this morning all our CCAMLR attendance females ($n=29$) have departed Cape Shirreff for their first trip to sea. Twenty one have completed their first trip to sea. Mean trip duration for females that have completed their first trip is 2.4 days (s.d.: 0.98; range: 1.1-4.8). One female has already completed three trips to sea.
7. We are monitoring pup growth of our CCAMLR attendance females and have gotten a post-perinatal mass on twenty-nine of the pups whose mothers have departed sea. Mass of two of the pups was after the second trip because their mother's trips were so short.
8. At the last census of fur seal study beaches on 21 December we recorded a total of 759 adult females and 1574 pups (1532 live and 42 dead). This is approximately a 13% reduction in pup production over last year for around the same time. There are still some pregnant females but we do not expect this percent reduction to change much as most females have already given birth and the rate of daily new arrivals is now so low.



9. Thus far 82.1% (174/212) of our tagged female population

have returned to Cape Shirreff. We recorded on seven new arrivals since last week. The natality rate for returned females thus far is 83.3%.

10. To date we have seen 84 fur seals that were tagged as pups in previous years. Thirteen new known-aged seals have returned since last week. No yearlings have been seen yet.
11. We have deployed 22 PIT tags (Passive Integrated Transponder) on adult tagged females thus far this year. This is the second year of deploying PIT tags to address the high incidence of tag loss in the population.
12. Our sightings of leopard seals are increasing. Fur seal pups have not yet entered the water so we have not recorded any leopards preying on pups. However, we have recorded juvenile or adult fur seal pelage in a leopard seal scat, confirming that leopards at Cape Shirreff do prey on fur seals other than pups.
13. We have been conducting a daily census of elephant seal wallows and looking for female elephant seals returning with satellite-linked data recorders that were deployed last January.

Weather:

14. This is our second week of above average winds. In general, the weather has been unseasonably dry and dominated by west winds. Mean wind speed was 13.7 mph with maximum wind gust of 46mph. The mean temperature for the week was 2.7C. The high temperature for the week was 7.5C and the low



was -0.2C. Total

precipitation this week was 0.39 inches.

Sunrise and sunset yesterday, the solstice, were 02:56 and 22:57. Mean daily solar radiation this week was 17,797 watts per sq. meter.

Camp:

15. With only three days until Christmas we are all looking forward to the holiday and opening the presents under our small tree. We have already taken a turkey out of the freezer to thaw in time for the holiday.
16. Our thoughts are of home, family, and friends as we enter the holiday. Best wishes to all for a happy Christmas with plenty of joy and peace for the season.

Submitted by AMLR staff currently residing at the Cape Shirreff field station, Livingston Island.

